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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/501,813

04/05/2005

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EXAMINER

WONG, EDNA

ART UNIT

PAPER NUMBER

1753

MAIL DATE

DELIVERY MODE

05/18/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/501,813	Applicant(s) NARITA ET AL.	
	Examiner Edna Wong	Art Unit 1753	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 April 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2 and 6 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2 and 6 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>April 24, 2007</u> . | 6) <input type="checkbox"/> Other: _____ |

This is in response to the Amendment dated April 24, 2007. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Response to Arguments

Claim Rejections - 35 USC § 112

Claim 6 has been rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The rejection of claim 6 under 35 U.S.C. 112, second paragraph, has been withdrawn in view of Applicants' amendment.

Claim Rejections - 35 USC § 103

Claims 3 and 5-7 has been rejected under 35 U.S.C. 103(a) as being unpatentable over JP 09-302496 ('496) in combination with Wikipedia ("Alkali Metal", pages 1-3).

The rejection of claims 3 and 5-7 under 35 U.S.C. 103(a) as being unpatentable over JP 09-302496 ('496) in combination with Wikipedia has been withdrawn in view of Applicants' amendment. Claims 3, 5 and 7 have been cancelled.

Allowable Subject Matter

The indicated allowability of claims 1 and 2 is withdrawn in view of the newly discovered reference(s) to **Castonguay** (US Patent No. 3,857,683) and **Phillips** (US Patent No. 3,704,211). Rejections based on the newly cited reference(s) follow.

Response to Amendment

Claim Rejections - 35 USC § 103

Claims **1-2 and 6** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Castonguay** (US Patent No. 3,857,683) in combination with **Phillips** (US Patent No. 3,704,211).

Castonguay teaches a method for forming a high-Re-content alloy film which contains Re at 98% or more by atomic composition, said method comprising:

performing an electroplating process (= current density of 2-12 A/dm²) using an electroplating bath which contains an aqueous solution including:

(i) a perrhenate ion in a concentration of 0.1 to 8.0 mol/L (= 1-150 g/l of potassium perrhenate, KReO₄);

(ii) at least one ion selected from the group consisting of nickel, iron and cobalt ions, in a total concentration of 0.005 to 2.0 mol/L (= 2-25 g/l cobalt (sulfate), Co⁺²(SO₄⁻²)); and

(iii) at least one organic acid selected from the group consisting of carboxylic acid, hydroxycarboxylic acid and amino acid, in a concentration of

greater than 5.0 to 15.0 equivalents to the concentration of all of said metal ions
(= 20-200 g/l citric acid, $\text{HOC}_3\text{H}_4(\text{COOH})_3$);

wherein said electroplating bath has a pH of 0 to 8 (= pH of 3-8), and a
temperature of 10 to 80°C (= 25-90°C) [col. 9, Example XXIII].

The alloy film to be formed has the remainder being at least one selected from
the group consisting of Ni, Co, Fe, Mn, Cr, Mo, W, Nb, Ta, Hf, Si, Al, Ti, Mg, Pt, Ir, Rh,
Au, Ag, P, B, C, Y and Ce, and inevitable impurities (= cobalt) [col. 9, Example XXIII].

The method of Castonguay differs from the instant invention because
Castonguay does not disclose the following:

- a. Wherein the solution includes at least one of a Li ion and a Na ion, in a
total concentration of 0.0001 to 5.0 mol/L, as recited in claim 1.
- b. Wherein said aqueous solution further includes at least one ion selected
from the group consisting of potassium, rubidium, cesium, calcium, strontium and
barium ions, wherein the total concentration of said at least one of lithium ion and
sodium ion in said electroplating bath is greater than the total concentration of said at
least one ion selected from the group consisting of potassium, rubidium, cesium,
calcium, strontium and barium ions, as recited in claim 6.

Castonguay teaches that additives where necessary to the performance of the
bath are indicated, but additives such as are commonly used in electroplating may be
useful to obtain results some systems (col. 3, lines 65-68).

Like Castonguay, Phillips teaches electroplating cobalt-rhenium (col. 3, line 51; and col. 4, Table 1). Phillips teaches that an electrolyte is used as the electrical conductor. These include ammonium chloride, sodium sulphate decahydrate, sodium citrate, sodium potassium tartrate, and others. Some of these are aqueous solutions, and others are not. Some of the above materials are added as metal complexing or chelating agents (col. 3, lines 24-29).

Phillips teaches 0-0.7 g/l P and 4.5-5.5 g/l Na (col. 4, Table I).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the solution described by Castonguay with wherein the solution includes at least one of a Li ion and a Na ion, in a total concentration of 0.0001 to 5.0 mol/L; and wherein said aqueous solution further includes at least one ion selected from the group consisting of potassium, rubidium, cesium, calcium, strontium and barium ions, wherein the total concentration of said at least one of lithium ion and sodium ion in said electroplating bath is greater than the total concentration of said at least one ion selected from the group consisting of potassium, rubidium, cesium, calcium, strontium and barium ions because these ions would have been commonly used in electrolytes as electrical conductors as taught by Phillips (col. 3, lines 24-29).

The reason or motivation to modify the reference may often suggest what the inventor has done, but for a different purpose or to solve a different problem. It is not necessary that the prior art suggest the combination to achieve the same advantage or

result discovered by the Applicants. *In re Linter* 458 F.2d 1013, 173 USPQ 560 (CCPA 1972); *In re Dillon* 919 F.2d 688, 16 USPQ2d 1897 (Fed. Cir. 1990), *cert. denied*, 500 US 904 (1991); and MPEP § 2144.

Furthermore, it has been held that the selection of a known material based on its suitability for its intended use supports a prima facie obviousness determination (MPEP § 2144.06 and § 2144.07)

Furthermore, the total concentrations are result-effective variables and one having ordinary skill in the art has the skill to calculate the total concentrations that would have determined the success of the desired reaction to occur, e.g., used as electrical conductors or metal complexing or chelating agents (MPEP § 2141.03 and § 2144.05(II)(B)).

c. Wherein said alloy film to be formed has a composition consisting of 98% or more, by atomic composition, of Re, as recited in claim 2.

The invention as a whole would have been obvious to one having ordinary skill in the art at the time the invention was made because Castonguay and Phillips teach a similar method as presently claimed. Similar processes can reasonably be expected to yield products which inherently have the same properties. *In re Spada* 15 USPQ 2d 1655 (CAFC 1990); *In re DeBlauwe* 222 USPQ 191; *In re Wiegand* 86 USPQ 155 (CCPA 1995).

Furthermore, if the composition is physically the same, it must have the same

properties. Products of identical chemical composition can not have mutually exclusive properties. A chemical composition and its properties are in separable (MPEP § 2112.01(II)).

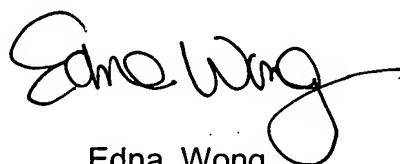
Applicant's submission of an information disclosure statement under 37 CFR 1.97(c) with the fee set forth in 37 CFR 1.17(p) on April 24, 2007 prompted the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 609.04(b). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Edna Wong whose telephone number is (571) 272-1349. The examiner can normally be reached on Mon-Fri 7:30 am to 4:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nam Nguyen can be reached on (571) 272-1342. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Edna Wong
Primary Examiner
Art Unit 1753

EW
May 13, 2007